

## CHAPTER SEVEN

# TRANSMISSION AND INTERNAL SHIFT MECHANISM

A five-speed transmission with reverse is used on all models. Transmission service requires engine removal and splitting the crankcase (Chapter Five).

**Table 1** lists transmission gear ratios. **Tables 2-5** list transmission and shift fork service specifications. **Tables 1-5** are located at the end of this chapter.

### TRANSMISSION/REVERSE SYSTEM IDENTIFICATION

This chapter describes service to the forward and reverse transmission assemblies identified in **Figure 1**.

1. Mainshaft (A).
2. Countershaft (B).
3. Reverse idle gear shaft (C).
4. Shift fork shaft and shift forks (D).
5. Shift drum (E).

### TRANSMISSION TROUBLESHOOTING

Refer to Chapter Two.

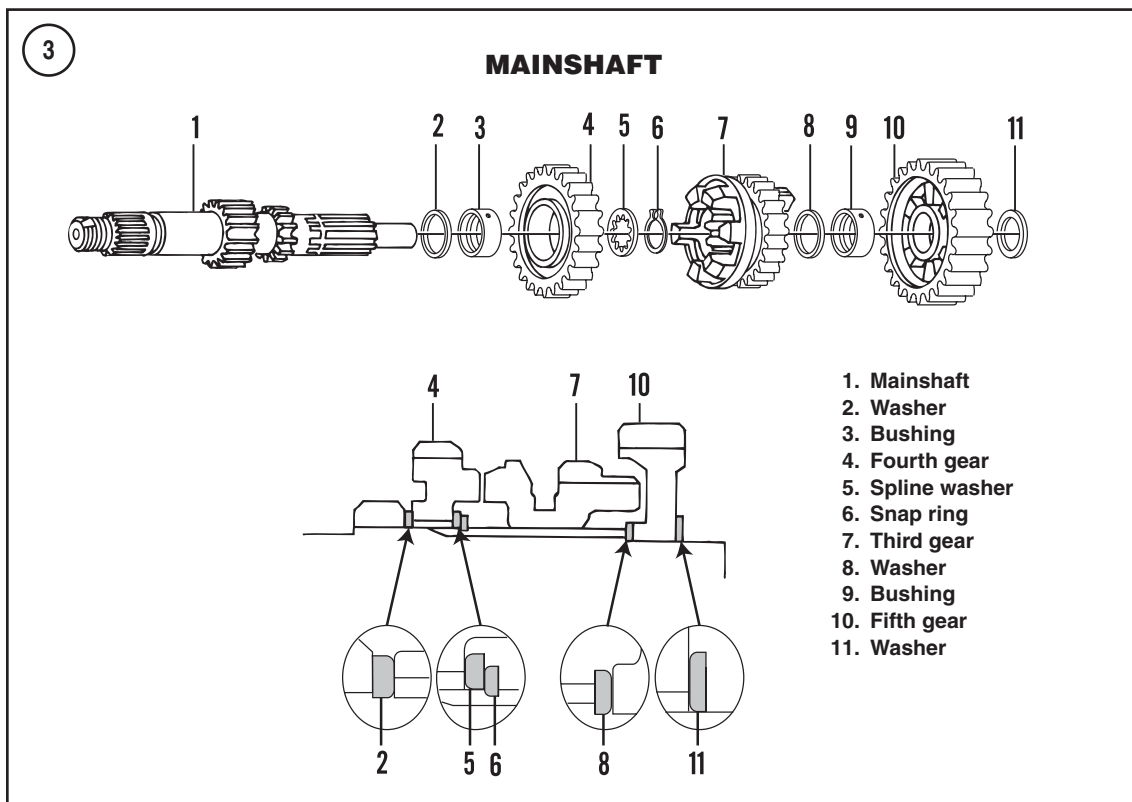
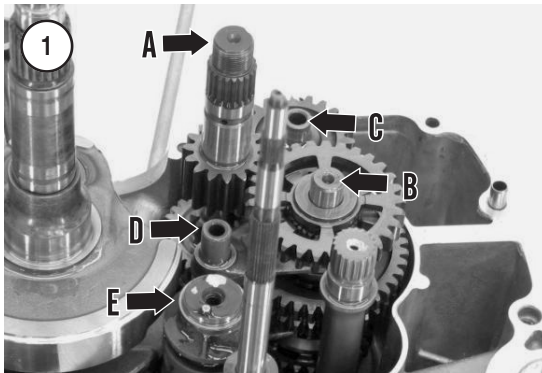
## TRANSMISSION OVERHAUL

### Removal/Installation

Remove and install the transmission and internal shift assemblies as described under *Crankcase Disassembly* and *Crankcase Assembly* in Chapter Five.

### Service Notes

1. Parts with two different sides, such as gears, snap rings and shift forks, can be installed backward. To maintain the correct alignment and position of the parts during disassembly, store each part in order and in a divided container.
2. The mainshaft snap ring is a tight fit on the shaft and can bend and twist during removal. Install a new snap ring during assembly.
3. To prevent bending and twisting the new snap ring during installation, use the following installation technique: open the new snap ring with a pair of snap ring pliers while holding the back of the snap ring with a pair of pliers (**Figure 2**), then slide the snap ring down the shaft and seat it into its correct transmission groove.



7



### Mainshaft Disassembly/Assembly

Refer to **Figure 3**.

1. Clean and dry the assembled mainshaft (**Figure 4**).
2. Remove the washer.
3. Remove fifth gear and the bushing.
4. Remove the washer.
5. Remove third gear.
6. Remove the snap ring and spline washer. Discard the snap ring.

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